FOR CRITICAL MINERALS, DEFENCE OFFERS BANKABLE GROWTH – AND NEW CHALLENGES

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As allied governments race to secure supply chains, miners say defence-linked demand is reshaping financing, offtake structures and the economics of processing – but long contracts, export controls and technical bottlenecks still pose major risks.

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Defence budgets are rising across North America and allied procurement agencies are moving to secure domestic supply chains, so the demand signal for minerals used in missiles, radar, magnets, batteries, communications and data infrastructure is becoming far more concrete. For advanced mining projects with downstream processing plans, that shift is translating into government-backed funding, defence-led requests for proposals, and early discussions around long-term offtake agreements.

Mining executives speaking to *Energy and Mines* suggest that defence demand is no longer a distant strategic narrative. It is already influencing project prioritisation, capital formation and the pace at which companies are trying to move assets into production.

"We've seen an escalation in interest," said Scott Monteith, President and CEO of Avalon Advanced Materials. "Twelve months ago, it was an interesting topic for governments. Today, they live in an environment of fear."

That fear centres on supply vulnerability.

For Western governments, the concentration of refining capacity in China – especially for rare earths and battery materials – has turned critical minerals from an industrial policy issue into a national security imperative. The result is a growing willingness to support projects that can offer not just ore, but processing capacity on allied soil.

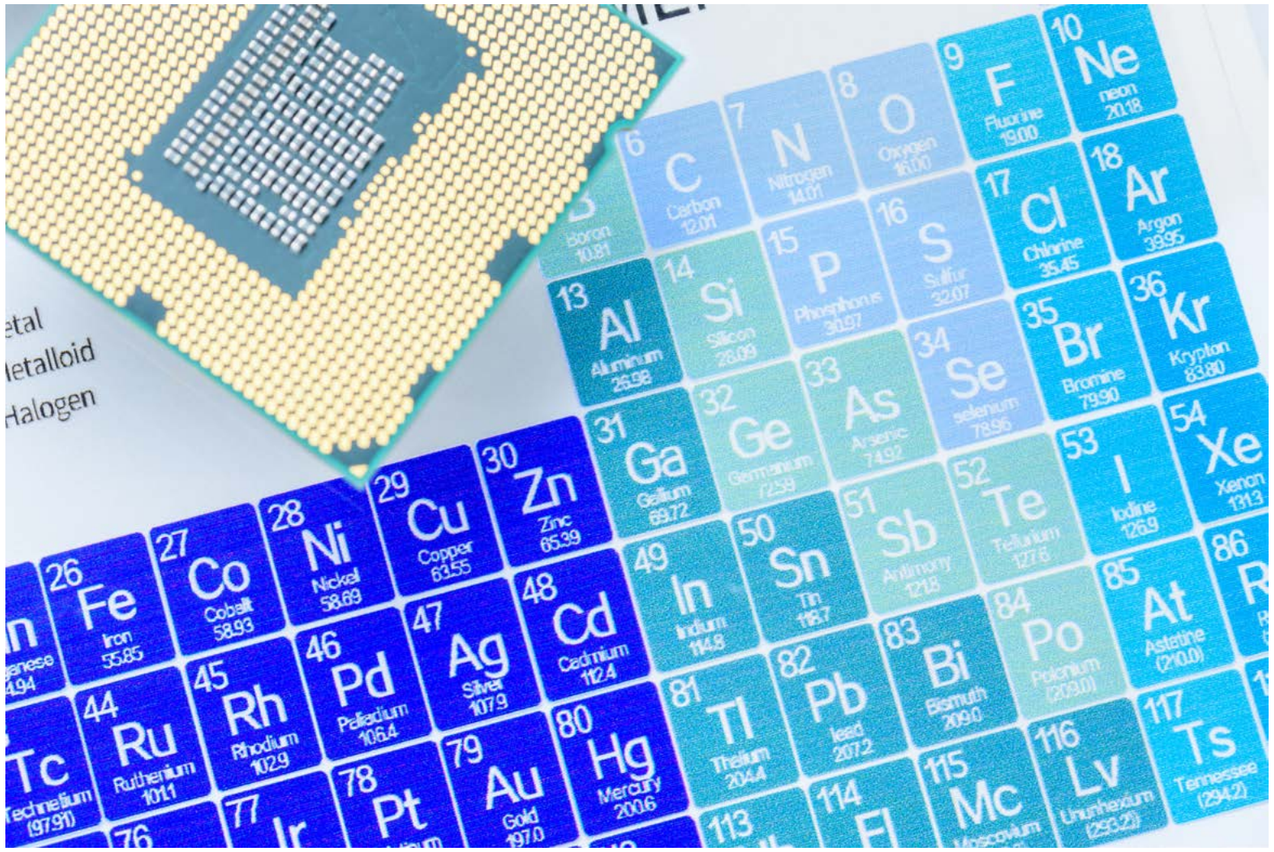
THE PROCESSING PREMIUM

For mining companies, the decisive differentiator is not simply the mineral deposit itself, but the ability to process material domestically.

Avalon is pursuing two major streams: a lithium refinery project in Thunder Bay through its Lake Superior Lithium subsidiary, and the rare earth-rich Nechalacho project in the Northwest Territories. Monteith said the company's strategy is built around midstream capacity, the weak link in North American critical mineral supply chains.

"The key to making critical minerals available to the market is processing," he said.

That processing focus is expensive. Avalon's first lithium refinery phase alone is expected to cost about C$1.3 billion and take roughly three years to build, targeting 30,000 tonnes of lithium hydroxide production.



But the logic is becoming easier to finance as governments and defence-linked buyers prioritise supply security over lowest-cost sourcing.
At Fortune Minerals, the same logic underpins the vertically integrated NICO project, which combines a cobalt-gold-bismuth-copper mine and concentrator in the Northwest Territories with a planned hydrometallurgical plant near Edmonton.

"The other key aspect to the project is midstream processing," said CEO Robin Goad. "If we don't process critical minerals here in Canada, we export minimally processed concentrates to other jurisdictions… and our industries don't benefit."

That vertical integration helped make Fortune the first Canadian project to receive US$6.4 million from the US Department of Defense – now Department of War – as part of its Title III programme to expand domestic critical minerals capacity. This was immediately backed by funding from the Canadian government, bringing the total Fortune expects to receive from the two governments to C$16.2 million.

For investors, such backing has become a powerful validation tool: Goad described defence funding as "a pathway to production", while Monteith expects to "crowd in private capital once the governments make their commitments".

FROM EVS TO MISSILES AND ELECTRONICS

One of the clearest shifts emerging from conversations with miners is how defence demand is changing the mineral mix.

In the earlier phase of the critical minerals boom, battery materials such as lithium, cobalt, nickel and graphite dominated the investment case, propelled by the energy transition and electric vehicle manufacturing.

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That demand remains important, and these minerals will benefit from their dual use, but defence procurement is broadening the list toward speciality and electronics metals.

Avalon's rare earth project contains materials used in permanent magnets for guidance systems, actuators and flight control motors, as well as samarium for high-temperature radar and missile applications. Yttrium and erbium, Monteith noted, are used in targeting lasers and fibre-optic communications. "These materials are of significant interest to the Department of War, as well as to the Department of National Defence in Canada," he said.

Fortune Minerals is seeing a similar evolution. While cobalt initially drew investment because of its role in battery chemistry, bismuth is emerging as a strategic focus because of its applications in electronics, soldering pastes, industrial systems and defence technologies.

In March 2026, the US Defense Industrial Base Consortium issued a request for proposals (RFP) focused on a highly specific list of metals, including bismuth, samarium, tungsten, gadolinium, germanium, hafnium and zirconium.

The message from governments' procurement agencies is clear: they are not seeking broad exposure to all critical minerals, but targeted investment in advanced projects that can quickly reduce supply chain risk for the most vulnerable materials.

"They want advanced projects," Goad said. "They're not investing in grassroots exploration. They want to be able to address their supply chain risks very, very quickly."

GOVERNMENT AS OFFTAKER, FINANCIER AND MARKET STABILISER

The growing role of defence buyers is changing not just demand forecasts, but deal structures. For Avalon's lithium products, Monteith said commercial sales can still flow through global trading houses and industrial buyers without heavy state involvement – but rare earths are different.

"With regards to the rare earths, the offtakers will likely be government," he said.

That reflects both the strategic nature of the end use and the immaturity of North America's heavy rare earth processing ecosystem. In these cases, governments are not simply potential customers. They are increasingly expected to act as anchor counterparties, offering binding offtakes, price floors, debt, equity or direct cash financing.

Monteith argued that this support is essential to "stabilize the risk for the private sector".

Fortune Minerals' experience suggests that this is already happening in practice. The company's US defence funding, matched by Canadian government support, with additional contributions from Alberta Innovates and the Northwest Territories government was "a lifeline to the company" at a time when mining capital markets were effectively closed, according to Goad.

But he also stressed the discipline this introduces. Most programmes require companies to pre-fund expenditures and provide matching capital, forcing miners to keep raising private money alongside public grants.

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THE RISKS OF THE DEFENCE PREMIUM

For all the upside, executives also highlighted a new set of risks that comes with defence alignment.

The most immediate is pricing rigidity. Governments often prioritise security of supply over lowest price, which can help support project economics. But once terms are agreed, miners may be locked into long-duration contracts that limit upside if markets tighten. "Long-term contracts can reduce price flexibility," Monteith said.

Other risks are geopolitical and regulatory. Rare earths and speciality metals are increasingly exposed to export controls, national security reviews and domestic processing mandates. Ownership structures may face greater scrutiny, particularly where foreign capital is involved.

Monteith also warned of demand volatility specific to government procurement cycles, with stockpiling programmes creating intense bursts of buying, followed by lengthy lulls. Miners must therefore plan operationally for "sudden demand spikes followed by long pauses."

Tariffs and retaliatory trade measures are an additional threat.

There is also a reputational dimension, though Goad downplayed concerns that community resistance to defence-linked supply chains would materially hinder advanced projects. In the Northwest Territories, where mining contributes roughly 45% of direct and indirect GDP, he argued that new projects are critical to offset the decline of existing diamond operations and sustain local economies.

"We cannot neglect our important defence industry," he said, linking mineral development to both economic resilience and Arctic sovereignty.

Several miners and consultancies contacted for this interview, however, declined to be involved, citing the "heightened sensitivity" around the topic of defence.

TECHNOLOGY, TALENT AND THE RACE TO BUILD KNOWLEDGE

Beyond finance, mining executives identified a deeper structural challenge: North America is rebuilding industrial capabilities that, in some cases, scarcely existed.

For lithium refining, proven Western technology providers are starting to emerge, making execution risk more manageable.

Heavy rare earths remain more difficult. Monteith said Avalon's rare earth flowsheet relies on newly developed processes created with university researchers, highlighting the limited base of Western engineering know-how. "Right now that knowledge and that experience is limited in the West," he said.

The talent pipeline is equally thin. Universities, he added, still lack dedicated degree programmes for critical minerals processing engineers, a gap that could become a bottleneck as more allied-backed projects advance simultaneously.

This shortage may ultimately prove as important as ore grades or financing structures. Governments can provide grants and offtakes, but scaling a secure supply chain requires metallurgists, chemical engineers and plant operators who know how to run these complex systems at commercial scale.

FROM STRATEGIC THEORY TO INVESTABLE REALITY

The most striking takeaway from conversations with miners is that defence demand is converting abstract strategic value into financeable project milestones.

Whether through Title III-style defence funding, infrastructure grants, matched public capital or future long-term offtake, governments are beginning to provide the demand certainty needed to move advanced projects toward construction.

The implications go well beyond individual companies. As supply chains "collapse into geographic silos", as Goad put it, mining, refining and downstream manufacturing are being reorganised around allied blocs rather than purely global cost optimisation. For advanced projects in Canada, Australia, the UK and the US, that realignment is creating a rare window in which security, industrial policy and mining finance are finally pointing in the same direction.

The opportunity is significant – but so is the challenge. Success will depend not just on discovering minerals, but on building processing plants, securing long-term public-private capital, training a specialised workforce and navigating a world where defence urgency can accelerate projects one year and pause procurement the next.

For the mining sector, the defence turn is not a simple demand boom. It is the emergence of an entirely new project finance model – one where strategic necessity may matter as much as commodity price. And for the most advanced critical mineral projects, that may be what finally turns decades of ambition into bankable reality.